



Astragalus wulingensis (Leguminosae), a new species from Hunan China

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Abstract

A new species of *Astragalus* Linn. (Leguminosae) from Wuling Mountain of Hunan province, China, *Astragalus wulingensis* Jia X. Li & X. L. Yu *sp. nov.* is described, illustrated, and compared with its close relatives. It belongs to section *Lotidium* Bunge, subgen. *Astragalus* Bunge. The new species is endemic to Wuling Mountain in NW Hunan Province and has limited populations and vulnerable habitat. *Astragalus wulingensis* is assessed as Critically Endangered (CR B2c) according to IUCN Red List criteria.

Key words: *Astragalus sinicus*, Taxonomy, Wuling Mountain

Introduction

Wuling Mountain, which is situated at N 27°28'–30°05', E 107°02'–111°33', belongs to Mt. Wuling- Mt. Wushan subregion of the floristic region of Central China (Qi *et al.* 1995), covering an area of about 100 000 km². In the period of 'indosinian movement' and the 'yanshan movement', Wuling Mountain was upheaved, then gradually became the current mid-mountain and subalpine landform through a series of complex geological evolutionary processes. It is on the eastern edge of the Yunnan-Guizhou Plateau and the altitude ranges from 100 m (bottom of Yuan River) to 2 577 m (Fanjing Mountain). It lies in the subtropical humid monsoon region and has a mild, moist climate. According to the literature of Chen *et al.* (2001), 4119 species of seed plants have been recorded in this region. It is inferred to be an important dispersal route for angiosperms (Chen *et al.* 2001). In recent years, many new taxa and new distributions have been reported from this region (Chen *et al.* 2011). Here we report a new species of *Astragalus*.

Astragalus Linnaeus (1753: 755) belongs to the family Leguminosae, and is one of the largest genera of angiosperms, containing ca. 2 500 species distributed mainly in northern hemisphere, but also in North America and South America (Lewis *et al.* 2005). As one of the centres of diversity of the genus, 401 species of *Astragalus* have been found in China (Xu & Podlech 2010) including many recently found new species for *Flora of China* project. Most of them are representatives of steppe and arid areas in Qinghai-Tibet Plateau, Southwest, Northwest and North China. However, the 13 species of Section *Lotidium* Bunge (1868: 5) are mainly distributed in more humid places along the Yangtze River valleys in Central and Southeast China (Xu & Podlech 2010).

Astragalus sinicus Linnaeus (1767: 103), a common species widely distributed in East Asia, has previously been the only wild species of *Astragalus* which has been identified from Wuling Mountain (Ye 1994) and the larger Hunan Province (Qi & Yu 2002, Xu & Podlech 2010, Liu 2012). During the field investigations in Sangzhi County in May 2005, the second author found some plants of what was thought to be possibly *A. sinicus* with white flowers, and took some photos. Such plants were also found from neighboring Mt. Huping, Shimen County (photos provided by Jing

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